"Sigmoidization" of the hypogastric artery

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A 64-year-old male underwent a routine pelvic ultrasound, during which a conglomerate of vessels was noticed around the prostate and bladder, presenting a flow pattern compatible with multiple arteriovenous fistulas (AVFs). A computed tomography (CT) angiography revealed a huge dilatation of the right hypogastric artery, from its origin to the pelvic floor, with increased diameter and tortuosity in its distal half (*A*; Cover). Multiple anomalous vessels were noticed around the prostate and bladder (*B*), related to the nidus of the arteriovenous malformation (AVM). The right common iliac artery was also dilated and tortuous.

The diagnosis of extensive pelvic AVM was made, with associated aneurysmatic degeneration of the afferent vessels, the right hypogastric and common iliac arteries.

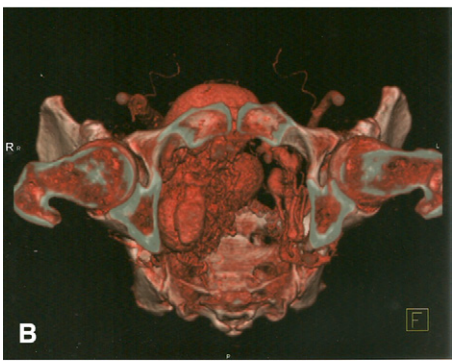
Four years later, the patient presented with symptoms of intestinal subocclusion, requiring a colonoscopy, which proved negative, and a new CT angiography disclosed a remarkable external compression of the rectum by the mega-artery. The patient underwent surgical repair, which consisted of resection of the mega-artery from its origin down to the surgically accessible distal level, thus relieving the rectal compression. The aneurysmatic right common iliac artery was resected and replaced by prosthesis from the aorta to the external iliac artery (*C*).

The postoperative course was uneventful, and, on follow-up, the patient was found completely free of symptoms.

The circulatory pattern of AVFs, either congenital or acquired, has been the subject of multiple studies aimed at the evaluation of their hemodynamic and structural consequences, at the proximal or distal circulatory beds.[1,2] At the distal level, a significant increase in venous output is noticed, leading in the long run to cardiomegaly or congestive heart failure, sometimes the first clinical manifestation of the malformation.[1]

At the proximal level, the dilatation of the afferent vessels has been regarded as a common feature in the congenital and acquired AVFs. The dramatic reduction of peripheral resistance causes significant structural alterations in the arterial wall architecture, leading to its dilatation.[2]

In the present case, the arteries became not only enlarged, but also tortuous, resulting in an extraordinary shape, which was fortunately coined by our radiologist as "sigmoidization."



REFERENCES

1. Holman E. Abnormal arteriovenous communications. Great variability of effects with particular reference to delayed development of cardiac failure. Circulation 1965;32:1001.
2. Sako Y, Varco RL. Arteriovenous fistula: results of management of congenital and acquired forms, blood flow measurements, and observations on proximal arterial degeneration. Surgery 1970;67:40-61.

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